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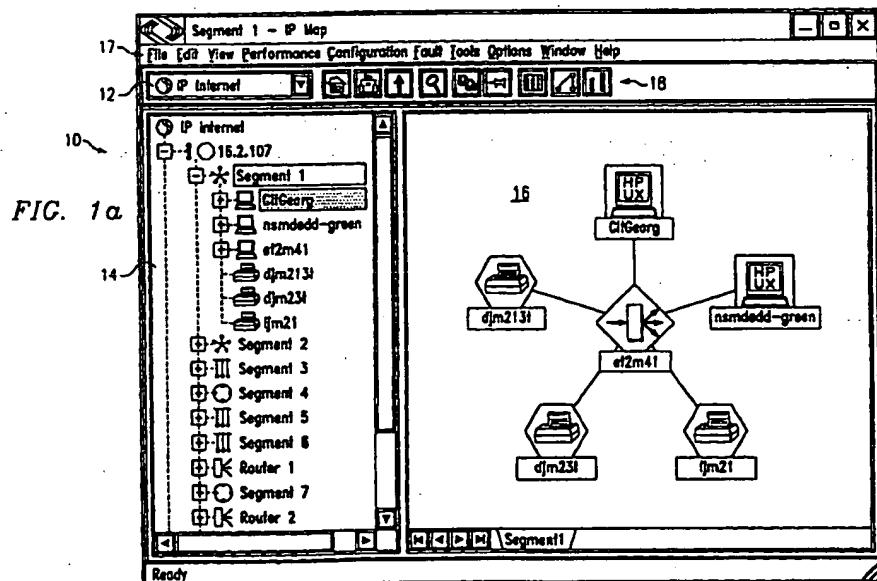
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### (54) A user interface mechanism for manipulating context in computer management applications

(57) Contextual information that is presented to the user of a windows-based computer environment through the user interface of a single open window of the environment may be readily filtered and changed by appropriate manipulation by the user of a context control feature (12) of the user interface. Manipulation of the context control feature (12) allows the user to look at a

given set of objects or tasks from different views or perspectives. It also provides the user with access to a different set of objects, thereby allowing the user to look at a different set of objects or tasks from the same view or perspective as an earlier set of objects or tasks.



allow users to quickly see objects from different perspectives and to have the visible functionality in a window restricted to that perspective.

[0010] Therefore, according to the present invention, a method and structure for providing contextual information to a user of a windows-based computer environment is provided. After opening a window having a user interface, such as a graphical user interface (GUI), the user can manipulate a context control feature of the user interface to determine the context of the window. The context control feature may be subsequently manipulated to readily define new window contexts as required. This method is capable of being implemented by a computer program of a computer-readable medium. The context of the window refers to a view or views of objects that appear in the window, their relationships, selections made by the user, and capabilities for manipulating the objects. The context control feature may be a context list box, a context tab, or other control feature of the user interface.

[0011] The user interface of the window has at a minimum the context control feature and a content pane. The user manipulates the context control feature to determine a context of the window that is illustrated in the content pane. The user interface may additionally have a scoping pane that provides more detail about the context, thereby allowing the user to specify specific views of the context. Menus of a menu bar and toolbar buttons of a toolbar of the user interface are defined by the context chosen by the user. Thus, when the user changes from a first context to a second context, the scoping pane, menus and toolbar buttons will change as necessary to be in accordance with the second context.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The novel features believed characteristic of the invention are set forth in the claims. The invention itself, however, as well as the preferred mode of use, and further objects and advantages thereof, will best be understood by reference to the following detailed description of an illustrative embodiment when read in conjunction with the accompanying drawing(s), wherein:

**Figures 1a and 1b** illustrate the use of a context list box in an application window that presents views of objects and provides functionality for acting on those objects, according to the present invention;

**Figures 2a, 2b, 2c and 2d** illustrate the use of a context list box in an application window that allows users to access different types of objects or applications, according to the present invention; and

**Figures 3a and 3b** illustrate the use of a context list box in an application window that provides lists of

tasks and allows users to access the user interface for accomplishing those tasks, according to the present invention.

#### 5 DESCRIPTION OF THE INVENTION

[0013] Contextual information is often used to filter information in the user interface of a windows-based computer environment. It is thus useful as a filtering tool to provide information to the user that is consistent with the objects or applications the user is currently using or the perspective from which the user is viewing the objects or applications. The present invention employs the user interface of a single open window, such as an application window, to empower the user to assert direct control over the filtering of information and the perspective from which information is presented to the user in the single window. Through the manipulation of a context control feature of the user interface, the user can choose the desired context for the window. The context is defined such that the objects that appear in the window, their relationships, and capabilities for manipulating the objects are tied to the context. For instance, using the present invention, the user may see the network connectivity of a computer system or the IT services (e.g., email, file sharing) in which the system participates all inside a single window by correctly manipulating the context control feature of the window. The context of the window may be readily changed as desired, again through appropriate manipulation of the context control feature.

[0014] The context control feature, which may be a context list box, a context tab, or other control feature of the user interface, contains a list of the contexts available within the window. User manipulation of context through the context control feature of the window is accompanied by a corresponding change in menu items, toolbar buttons, and views of presented objects according to the context chosen by the user. Relevant information from the initial context, such as currently selected objects, is maintained in the new context of the window and can be used to aid users in quickly accessing task relevant information or functionality. This feature makes the user more efficient in the task at hand.

[0015] Manipulation of the context control feature of the GUI of a single window can enable the user to look at a given set of managed objects in a different perspective or context. Alternatively, changing context can mean the user will have access to a different set of objects. Thus the user can look at a different set of objects from the same perspective as an earlier set of objects.

[0016] First, consider the use of the present invention as an explicit mechanism for filtering information and changing the perspective from which information is presented to the user via the user interface. A change in context via the context control mechanism is typically associated with a change in the objects presented and

is envisioned that the information presented in content pane 16 may take any form relevant to the data being presented, for example graphical, tabular, properties, wizard or chart form. The content panes 16 of Figures 1a and 1b, for instance, show information in graphical form; content pane 16 of Figure 1a shows a network map, while Figure 1b shows a service topology. The content panes 16 of Figures 2a, 2b, 2c, and 2d show information in tabular form. The content pane of Figure 3a shows a properties box while the content pane of Figure 3b shows a wizard.

[0023] The present invention therefore provides many advantages to the user. The user can focus on information that is relevant to the current task and this information can in turn be shared by various applications as context filters in order to vary the way that information is presented to the user. This enables the information presentation of the user interface to match the preferences and needs of the user as the user interacts with the computer system. Moreover, the sharing of contextual information allows independently developed applications to appear to the user as highly integrated applications that work closely together within a single user interface window in the computer environment.

[0024] The judicious manipulation of context can also enhance the productivity of the user. Contextual information such as the currently visible view or recent user actions can be used to set defaults that minimize the need for user input. The contextual information can be used to filter irrelevant information or steps so that users can more quickly reach their goals. The passing of contextual information between software within an application and between applications can eliminate the need for the user to duplicate their previous actions.

[0025] While the invention has been particularly shown and described with reference to a preferred embodiment, it will be understood by those skilled in the art that various changes in form and detail may be made therein without departing from the spirit and scope of the invention.

### Claims

1. A method for providing contextual information to a user of a windows-based computer environment, said method comprising:

opening a window having a user interface; and

manipulating a context control feature (12) of the user interface to determine a first context of the window.

2. The method of claim 1, wherein manipulating the context control feature comprises selecting a context identifier from a context list (13).

3. A computer-readable medium having a computer

program for providing contextual information to a user of a windows-based computer environment, said computer program comprising:

instructions for opening a window having a user interface; and

instructions for manipulating a context control feature (12) of the user interface to determine a first context of the window.

4. A user interface of a window that provides contextual information to a user of a windows-based computer environment, comprising:

a context control feature (12) of the user interface that has one or more available contexts; and

a content pane (16);  
wherein manipulating the context control feature (12) of the user interface determines a context of the window from the one or more available contexts that is illustrated in the content pane (16) of the user interface.

5. The user interface of claim 4, wherein the context control feature (12) is a context list box that has the one or more available contexts in a context list (13).

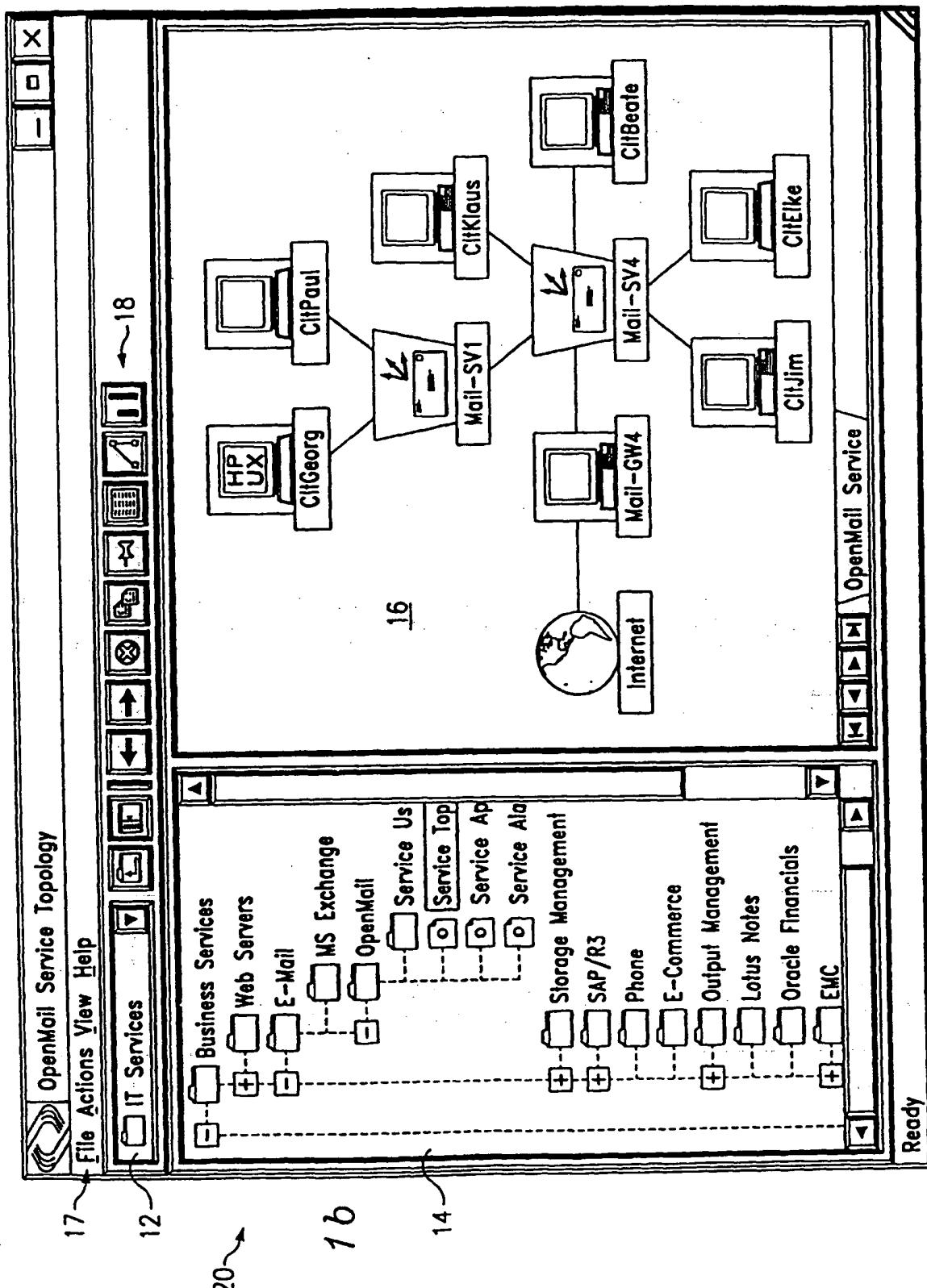
6. The user interface of claim 4, wherein the context control feature (12) is a context tab.

7. The user interface of claim 4, wherein the user interface further comprises a scoping pane (14) that provides a plurality of views of the context.

8. The user interface of claim 7, wherein the user interface further comprises:

a menu bar (17); and

one or more static toolbars (18),  
wherein one or more menus of the menu bar (17), one or more toolbar buttons of the one or more static toolbars (18), and the plurality of views of the scoping pane (14) are defined by the context of the window.



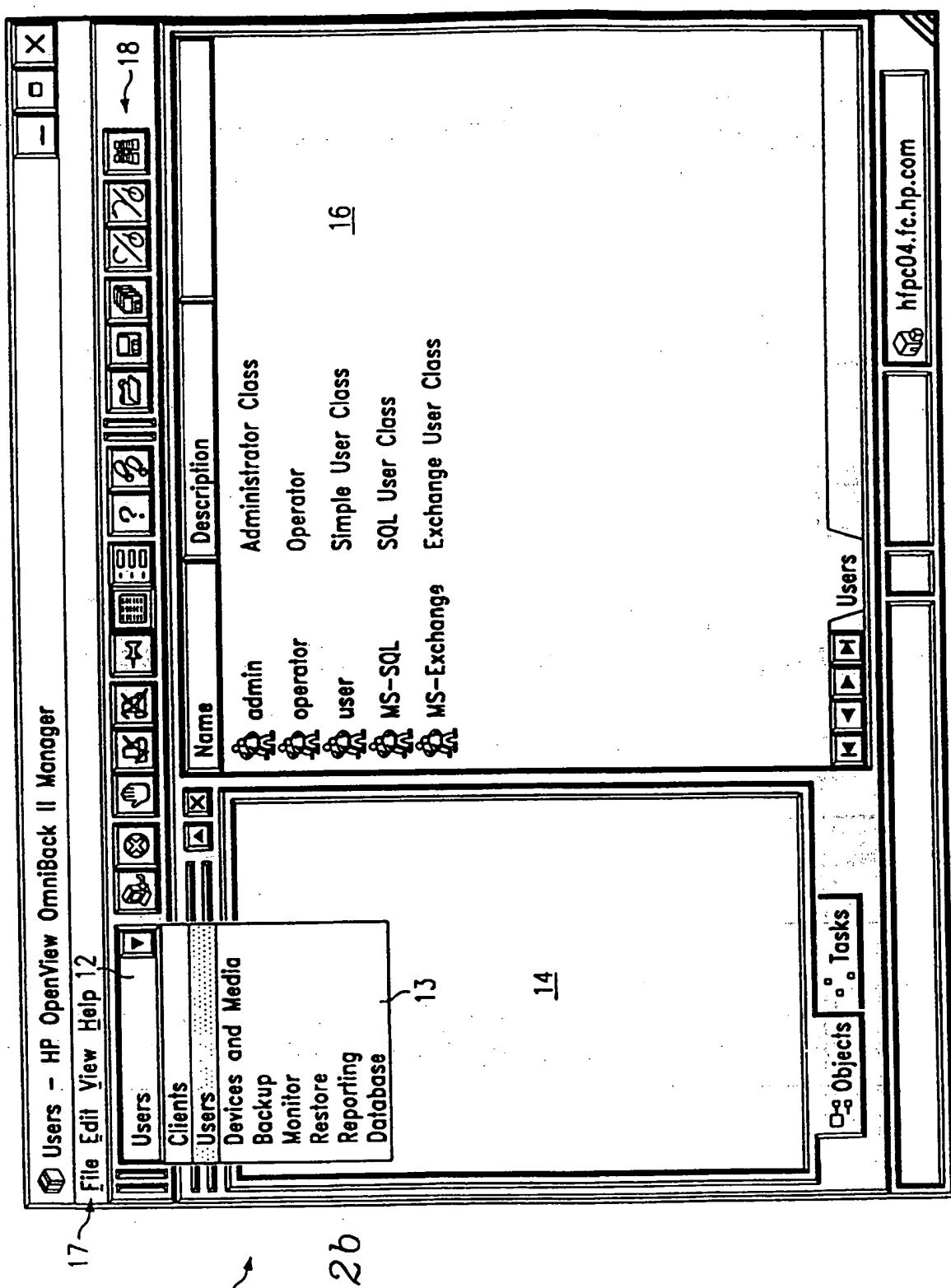


FIG. 26

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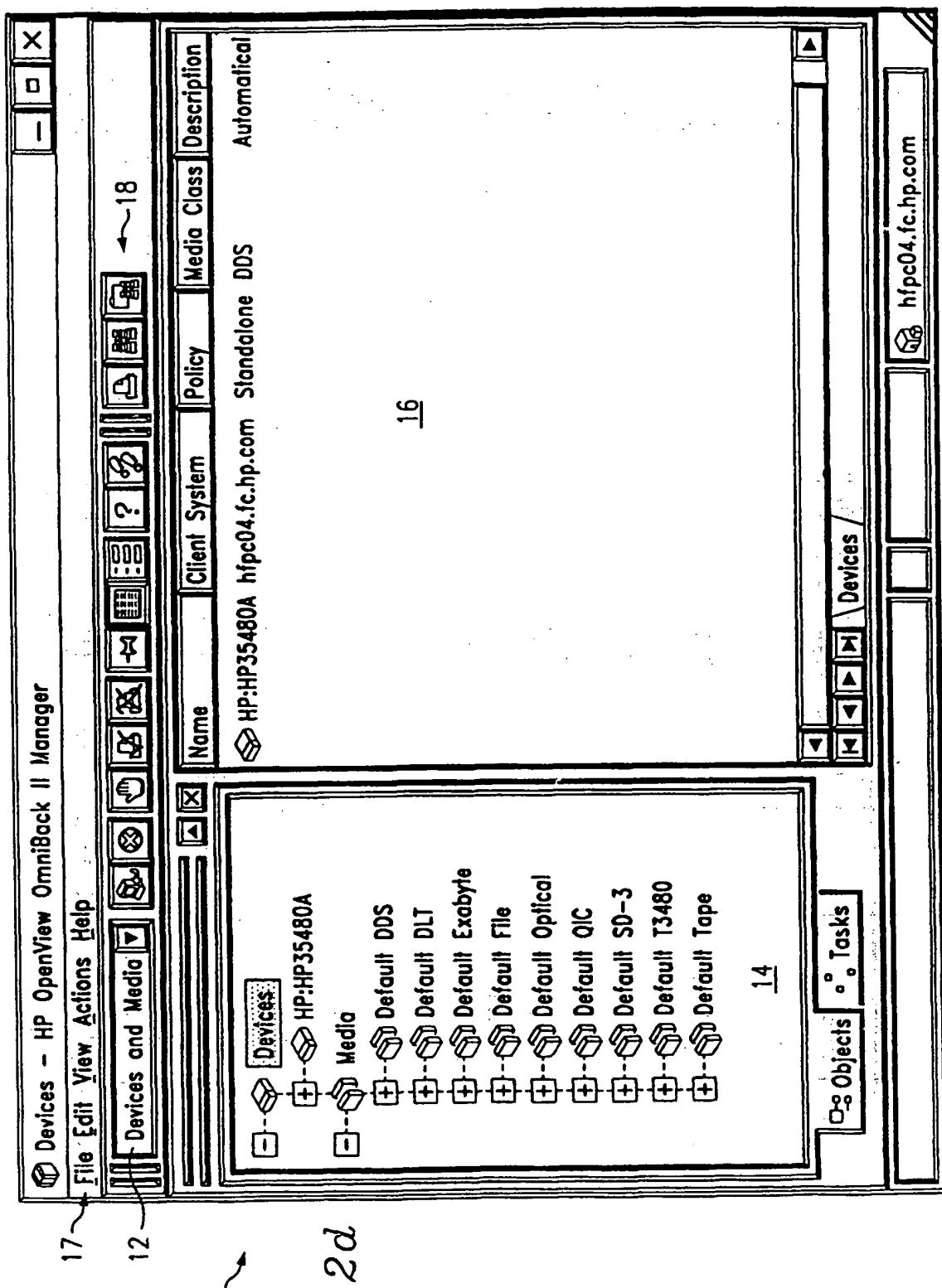


FIG. 2d

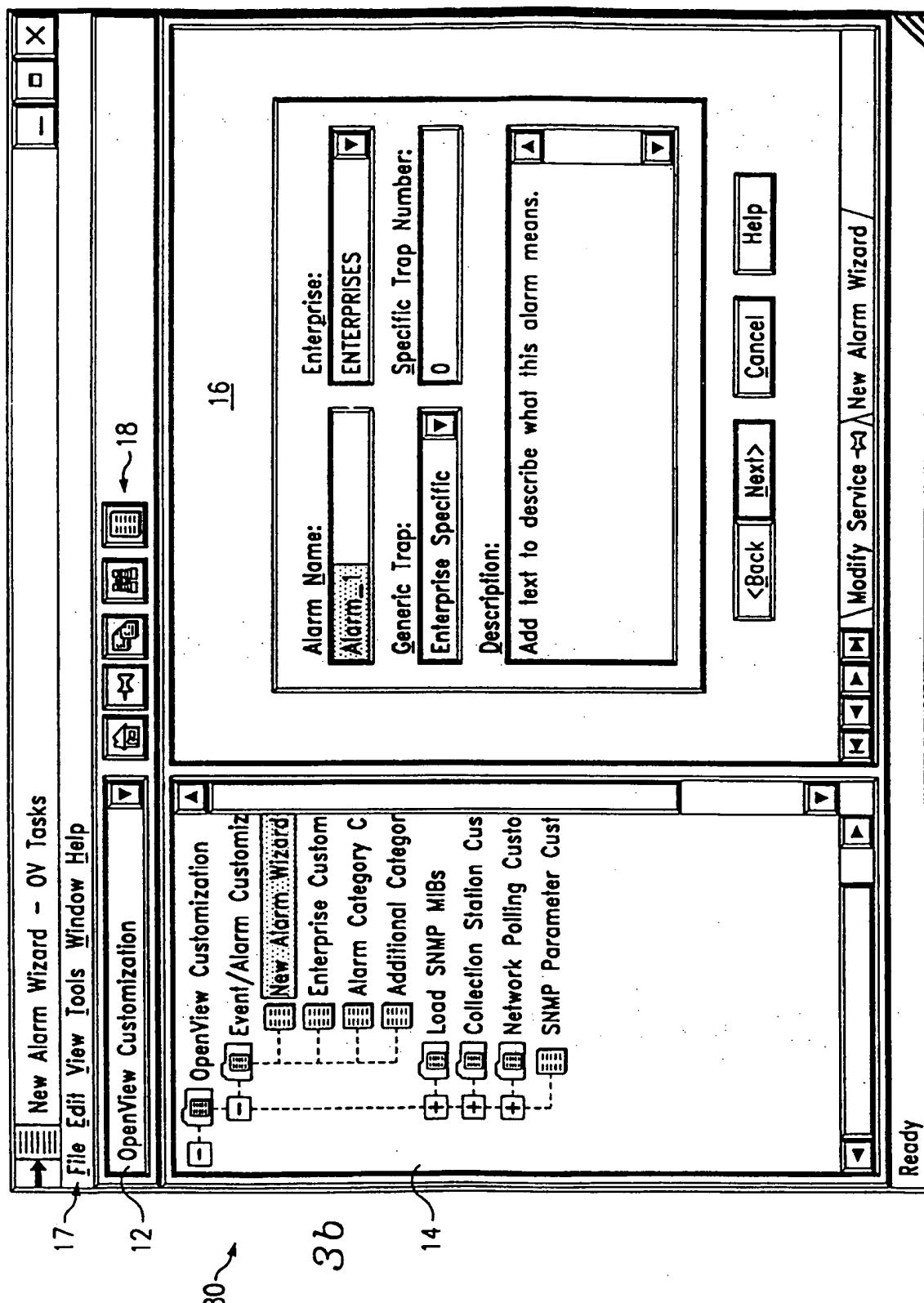


FIG. 3b

ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

EP 98 12 3600

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on. The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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